



**United States Environmental Protection Agency
Region 9 Laboratory**

**1337 S. 46th Street Building 201
Richmond, CA 94804**

Date: 2/14/2012

Subject: Analytical Testing Results - Project R33911
SDG: 12039A

From: Brenda Bettencourt, Director
EPA Region 9 Laboratory
MTS-2

To: Richard Fetzer
US EPA Region 3, Eastern Response Branch
3HS31

Attached are the results from the analysis of samples from the **Dimock Residential Groundwater** project. These data have been reviewed in accordance with EPA Region 9 Laboratory policy.

A full documentation package for these data, including raw data and sample custody documentation, is on file at the EPA Region 9 Laboratory. If you would like to request additional review and/or validation of the data, please contact Eugenia McNaughton at the Region 9 Quality Assurance Office.

If you have any questions, please ask for Richard Bauer, the Lab Project Manager at (510)412-2300.

Analyses included in this report:

Dissolved Hydrocarbon Gases by GC



United States Environmental Protection Agency
Region 9 Laboratory

1337 S. 46th Street, Building 201, Richmond, CA 94804
Phone:(510) 412-2300 Fax:(510) 412-2302

Project Manager: Richard Fetzer

Project Number: R33911

Project: Dimock Residential Groundwater

US EPA Region 3, Eastern Response Branch

100 Gypsum Road

Stroudsburg PA, 18360

SDG: 12039A

Reported: 02/14/12 16:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Collected	Date Received
HW31	1202020-03	Water	02/06/12 18:20	02/08/12 09:50
HW31-P	1202020-04	Water	02/06/12 18:28	02/08/12 09:50
HW31z	1202020-05	Water	02/06/12 18:20	02/08/12 09:50
TB25	1202020-06	Water	02/06/12 10:25	02/08/12 09:50
FB11	1202020-07	Water	02/06/12 14:36	02/08/12 09:50
HW30	1202020-08	Water	02/06/12 14:34	02/08/12 09:50
HW30-P	1202020-09	Water	02/06/12 15:00	02/08/12 09:50
TB26	1202020-10	Water	02/06/12 10:30	02/08/12 09:50
HW15a	1202020-11	Water	02/07/12 10:47	02/08/12 09:50
HW15a-P	1202020-12	Water	02/07/12 10:55	02/08/12 09:50
TB28	1202020-13	Water	02/07/12 07:05	02/08/12 09:50
FB12	1202023-01	Water	02/07/12 13:35	02/09/12 10:00
HW51	1202023-02	Water	02/07/12 13:48	02/09/12 10:00
HW51-P	1202023-03	Water	02/07/12 13:56	02/09/12 10:00
TB27	1202023-04	Water	02/07/12 07:00	02/09/12 10:00
HW47	1202023-05	Water	02/08/12 11:50	02/09/12 10:00
HW47-P	1202023-06	Water	02/08/12 12:25	02/09/12 10:00
TB29	1202023-07	Water	02/08/12 07:05	02/09/12 10:00
FB13	1202023-08	Water	02/08/12 09:00	02/09/12 10:00
HW38	1202023-09	Water	02/08/12 10:41	02/09/12 10:00
HW38-P	1202023-10	Water	02/08/12 10:52	02/09/12 10:00
TB30	1202023-11	Water	02/08/12 07:10	02/09/12 10:00

SDG ID 12039A

Small amounts of methane were detected in the method blanks, field blanks and trip blanks. Field sample results are flagged as estimates if they do not exceed levels found in associated blanks by at least five times.

Samples 1202023-08, -09, -10, and -11 were received at 8 degrees C, which is above the recommended temperature range of 2 - 6 degrees C. No significant impact is anticipated on the sample results.

Work Order(s)

1202020

1202023



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202020-03		Water - Sampled: 02/06/12 18:20							
Sample ID: HW31		Dissolved Gases by RSK-175							
Methane	RE1	17,000		130	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		7.3		1.2	"	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			116 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1		116 %	66.4-153%		B2B0041	02/09/12	02/09/12	
Lab ID: 1202020-04		Water - Sampled: 02/06/12 18:28							
Sample ID: HW31-P		Dissolved Gases by RSK-175							
Methane		73		1.2	ug/L	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			116 %	66.4-153%		"	"	"	
Lab ID: 1202020-05		Water - Sampled: 02/06/12 18:20							
Sample ID: HW31z		Dissolved Gases by RSK-175							
Methane	RE1	15,000		130	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		7.5		1.2	"	B2B0032	02/08/12	02/08/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			115 %	66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>	RE1		111 %	66.4-153%		B2B0041	02/09/12	02/09/12	
Lab ID: 1202020-06		Water - Sampled: 02/06/12 10:25							
Sample ID: TB25		Dissolved Gases by RSK-175							
Methane		1.3	B1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			115 %	66.4-153%		"	"	"	
Lab ID: 1202020-07		Water - Sampled: 02/06/12 14:36							
Sample ID: FB11		Dissolved Gases by RSK-175							
Methane		1.1	B1, C1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>			113 %	66.4-153%		"	"	"	
Lab ID: 1202020-08		Water - Sampled: 02/06/12 14:34							
Sample ID: HW30		Dissolved Gases by RSK-175							
Methane		120		1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325



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100 Gypsum Road
Stroudsburg PA, 18360

SDG: 12039A
Reported: 02/14/12 16:36

Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202020-08							Water - Sampled: 02/06/12 14:34		
Sample ID: HW30							Dissolved Gases by RSK-175		
Surrogate: Acetylene		116 %		66.4-153%		B2B0032	02/08/12	02/09/12	
Lab ID: 1202020-09							Water - Sampled: 02/06/12 15:00		
Sample ID: HW30-P							Dissolved Gases by RSK-175		
Methane		92		1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		114 %		66.4-153%		"	"	"	
Lab ID: 1202020-10							Water - Sampled: 02/06/12 10:30		
Sample ID: TB26							Dissolved Gases by RSK-175		
Methane		1.0	B1, C1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		113 %		66.4-153%		"	"	"	
Lab ID: 1202020-11							Water - Sampled: 02/07/12 10:47		
Sample ID: HW15a							Dissolved Gases by RSK-175		
Methane	RE1	14,000		97	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		130		1.2	"	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		112 %		66.4-153%		"	"	"	
Surrogate: Acetylene	RE1	118 %		66.4-153%		B2B0041	02/09/12	02/09/12	
Lab ID: 1202020-12							Water - Sampled: 02/07/12 10:55		
Sample ID: HW15a-P							Dissolved Gases by RSK-175		
Methane		27		1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		111 %		66.4-153%		"	"	"	
Lab ID: 1202020-13							Water - Sampled: 02/07/12 07:05		
Sample ID: TB28							Dissolved Gases by RSK-175		
Methane		1.1	B1, C1, J	1.2	ug/L	B2B0032	02/08/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
Surrogate: Acetylene		115 %		66.4-153%		"	"	"	
Lab ID: 1202023-01							Water - Sampled: 02/07/12 13:35		
Sample ID: FB12							Dissolved Gases by RSK-175		
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202023-01							Water - Sampled: 02/07/12 13:35		
Sample ID: FB12							Dissolved Gases by RSK-175		
Ethene		ND	U	1.1	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		114 %		66.4-153%		"	"	"	
Lab ID: 1202023-02							Water - Sampled: 02/07/12 13:48		
Sample ID: HW51							Dissolved Gases by RSK-175		
Methane	RE1	3,400		39	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		75		1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		110 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>		RE1	117 %	66.4-153%		B2B0053	02/12/12	02/12/12	
Lab ID: 1202023-03							Water - Sampled: 02/07/12 13:56		
Sample ID: HW51-P							Dissolved Gases by RSK-175		
Methane	RE1	5,600		39	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		100		1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		112 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>		RE1	115 %	66.4-153%		B2B0053	02/12/12	02/12/12	
Lab ID: 1202023-04							Water - Sampled: 02/07/12 07:00		
Sample ID: TB27							Dissolved Gases by RSK-175		
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		121 %		66.4-153%		"	"	"	
Lab ID: 1202023-05							Water - Sampled: 02/08/12 11:50		
Sample ID: HW47							Dissolved Gases by RSK-175		
Methane	RE1	7,900		64	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		108 %		66.4-153%		"	"	"	
<i>Surrogate: Acetylene</i>		RE1	118 %	66.4-153%		B2B0053	02/12/12	02/12/12	
Lab ID: 1202023-06							Water - Sampled: 02/08/12 12:25		
Sample ID: HW47-P							Dissolved Gases by RSK-175		
Methane	RE1	10,000		64	ug/L	B2B0053	02/12/12	02/12/12	RSK-175/SOP325
Ethane		0.6	C1, J	1.2	"	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		RE1	115 %	66.4-153%		B2B0053	02/12/12	02/12/12	
<i>Surrogate: Acetylene</i>			106 %	66.4-153%		B2B0041	02/09/12	02/09/12	



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Sample Results

Analyte	Reanalysis / Extract	Result	Qualifiers / Comments	Quantitation Limit	Units	Batch	Prepared	Analyzed	Method
Lab ID: 1202023-06							Water - Sampled: 02/08/12 12:25		
Lab ID: 1202023-07							Water - Sampled: 02/08/12 07:05		
Sample ID: TB29							Dissolved Gases by RSK-175		
Methane		0.8	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		113 %		66.4-153%		"	"	"	
Lab ID: 1202023-08							Water - Sampled: 02/08/12 09:00		
Sample ID: FB13							Dissolved Gases by RSK-175		
Methane		0.9	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		113 %		66.4-153%		"	"	"	
Lab ID: 1202023-09							Water - Sampled: 02/08/12 10:41		
Sample ID: HW38							Dissolved Gases by RSK-175		
Methane		5.0		1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		113 %		66.4-153%		"	"	"	
Lab ID: 1202023-10							Water - Sampled: 02/08/12 10:52		
Sample ID: HW38-P							Dissolved Gases by RSK-175		
Methane		3.8	B1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		112 %		66.4-153%		"	"	"	
Lab ID: 1202023-11							Water - Sampled: 02/08/12 07:10		
Sample ID: TB30							Dissolved Gases by RSK-175		
Methane		0.7	B1, C1, J	1.2	ug/L	B2B0041	02/09/12	02/09/12	RSK-175/SOP325
Ethane		ND	U	1.2	"	"	"	"	RSK-175/SOP325
Ethene		ND	U	1.1	"	"	"	"	RSK-175/SOP325
<i>Surrogate: Acetylene</i>		115 %		66.4-153%		"	"	"	



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Quality Control

Analyte	Result	Qualifiers / Comments	Quantitation Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Batch B2B0032 - RSK175 - Dissolved HC Gases

**Prepared & Analyzed: 02/08/12
Dissolved Gases by RSK-175 - Quality Control**

Blank (B2B0032-BLK1)

Methane	0.9	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	78.5			"	66.5		118	66.4-153		
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LCS (B2B0032-BS1)

Methane	47.7			1.2 ug/L	44.1		108	70-130		200
Ethane	93.9			1.2 "	83.2		113	77-137		200
Ethene	88			1.1 "	78.3		112	78-138		200

Surrogate: Acetylene	79.2			"	72.0		110	66.4-153		
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Batch B2B0041 - RSK175 - Dissolved HC Gases

**Prepared & Analyzed: 02/09/12
Dissolved Gases by RSK-175 - Quality Control**

Blank (B2B0041-BLK1)

Methane	0.7	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	73.5			"	66.5		111	66.4-153		
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LCS (B2B0041-BS1)

Methane	44.9			1.2 ug/L	44.1		102	70-130		200
Ethane	88.6			1.2 "	83.2		106	77-137		200
Ethene	83.2			1.1 "	78.3		106	78-138		200

Surrogate: Acetylene	76.2			"	72.0		106	66.4-153		
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Batch B2B0053 - RSK175 - Dissolved HC Gases

**Prepared & Analyzed: 02/12/12
Dissolved Gases by RSK-175 - Quality Control**

Blank (B2B0053-BLK1)

Methane	0.7	C1, J		1.2 ug/L						
Ethane	ND	U		1.2 "						
Ethene	ND	U		1.1 "						

Surrogate: Acetylene	75.9			"	66.5		114	66.4-153		
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LCS (B2B0053-BS1)

Methane	47			1.2 ug/L	44.1		107	70-130		200
Ethane	92.9			1.2 "	83.2		112	77-137		200
Ethene	87			1.1 "	78.3		111	78-138		200

Surrogate: Acetylene	78.9			"	72.0		110	66.4-153		
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Qualifiers and Comments

J The reported result for this analyte should be considered an estimated value.

C1 The reported concentration for this analyte is below the quantitation limit.

B1 The concentration of this analyte found in this sample was less than five times the concentration found in the associated method blank.

U Not Detected

NR Not Reported

RE1, RE2, etc: Result is from a sample re-analysis.